



# UNITED STATES PATENT AND TRADEMARK OFFICE

*cen*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,066	04/14/2004	Peter Schwarz	2322.70253	6070
24978	7590	07/30/2007		
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606			EXAMINER VALENTIN, JUAN D	
			ART UNIT	PAPER NUMBER
			2877	
			MAIL DATE	DELIVERY MODE
			07/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/824,066

Applicant(s)

SCHWARZ, PETER

Examiner

Juan D. Valentin II

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7 and 9-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7 and 9-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 03/19/2007 & 04/27/2007 have been fully considered but they are not persuasive. Applicant has argued in the initial response dated 03/19/2007 argues on page 18 third paragraph in the Remarks section that Eidelman fails to disclose "diffuser means, mounted at a specified diffuser surface angle relative to a geometrical connecting axis from the radiation means to the geometrical center of the measurement surface". Examiner kindly disagrees with applicant's assertion. Examiner maintains that no matter what the angle of illumination of illuminator 60 (Fig. 3) depends from, the diffuser mounting angle can still be "relative" to a geometrical connecting axis going from the illumination means and the center of the measurement surface. The term "relative" is so broad that trying to preclude any structural arrangement from reading on such broad claim language clearly is reading scope that just is not defined within the claim. Applicant has not defined what the exact "relative" position is and how it relates to said structural limitations in the claim. Therefore, it is the position of the Office that any light source/diffuser combination read on this limitation by merely drawing an imaginary line from the illumination source and the center of the measurement surface and stating that said arrangement is mounted "relative" to this imaginary line.

2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

Art Unit: 2877

generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Eidelman clearly suggests reason to provide combination with Wiles for the purposes of providing individual point light illumination to the surface of an object to produce a flood of multi-source illumination to the surface while minimizing undesired reflections from wasted light as shown in the first paragraph of page seven in the Non-Final Office action dated 12/15/2006.

3. In response to applicant's argument that Wiles and Eidelman are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both patents share a primary classification in 356/237.2 and are both drawn to the field of optical based surface measuring systems for detection of flaws and impurities of surface conditions for samples under test. Eidelman is drawn to the inspection of flat articles after a manufacturing step of applying a coating has been applied (abstract) while Wiles clearly shows the measurement of surface characteristics of painted (coated) surfaces (col. 1, lines 13-18). It can be seen that both prior art references clearly are analogous art and one of ordinary skill in the art would have no problem using the teachings of Wiles in combination of Eidelman with a reasonable expectation for success.

4. Applicant has argued in the supplemental response dated 04/27/2007 that the references of Wiles and Eidelman either alone or in combination do not suggest or teach a device for detecting

incident radiation dependent on it's wavelength (applicant's Remarks section pages 1-2 of Supplemental Response dated 04/27/2007). While not conceding to applicants argument, Examiner would like to point out that applicants assertion is based on claimed language that fails to include the total amendment of independent claim 1. The fully amended portion of claim 1 that applicant is referring too exactly reads, "said radiation detector means comprising a device suitable for detecting incident radiation dependent on a wavelength of said radiation". Examiner contends that the scope of this limitation is much broader that the scope of the amendment applicant is attempting to argue. There are many different types of detectors that are "suitable" for the detection of wavelength dependent radiation, and it is the position of the Office that the detectors of both Wiles and Eidelman are "suitable" for the detection of wavelength dependent measurement radiation.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 20 discloses "preferably" performing a said function. This statement is indefinite, and does not further add patentable weight to the claimed limitation. Either applicant is stating something is movable or it is not, stating that something is preferable does not further limit the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6, 7, 9-18, 20, 21, 25-31 rejected under 35 U.S.C. 103(a) as being unpatentable over Wiles et al. (USPN '964 B2, hereinafter Wiles) in view of Eidelman et al. (USPN '734 B1, hereinafter Eidelman).

**Claims 1, 4, 6, 7, 9-11, 13-17**

Wiles in conjunction with Fig. 3, discloses a device for measuring the properties of high-gloss or metallic finishes in particular of vehicle bodies, having at least one first radiation means 26 having at least one radiation source which directs substantially collimated radiation at a predetermined angle towards a measurement surface, at least one second radiation means 12a having plurality (claim 4, col. 3, lines 55-61) of one radiation source which projects substantially non-collimated radiation onto the measurement surface, at least one radiation detector means 20 which captures at least a portion of the radiation reflected and/or diffused off the measurement surface and emits at least one measurement signal which is characteristic of the reflected and/or diffused radiation, said radiation detector means comprising a device suitable for detecting incident radiation dependent on a wavelength of said radiation (claims 13-18, col. 3, line 49-col. 5, line 12, col. 5, line 64-col.. 7, line 24). It is the position of the Office that the radiation detector means of Wiles contains a device (detector 20, Fig. 1) suitable for detecting wavelength dependent light (col. 6, lines 12-21, col. 14, lines 38-41).

Wiles substantially teaches the claimed invention except that it fails to show the use of a mounted (claim 7) diffuser (claim 6) and the space above the measurement surface has substantially radiation-absorbing properties (claim 10). Eidelman shows that it is known to provide the space above the measurement surface has substantially radiation-absorbing properties and to use a diffuser mounted (Fig. 6, ref. 60, claims 7-8) at a particular angle that is variable between the plurality of light sources used (col. 14, line 66-col. 15, line 3, col. 19, line 65-col. 20, line 10, col. 20, line 66-col. 21, line 22, col. 22, lines 43-61) for an semiconductor manufacturing inspection apparatus. It would have been obvious to someone of ordinary skill in the art to combine the device of Wiles with the light diffuser and light absorbing housing properties of Eidelman for the purposes of providing diffuse lighting and minimizing of internal light reflections inside the housing (Eidelman, col. 22, lines 50-61).

### **Claims 2 & 31**

Wiles as applied above further discloses wherein the angles of illumination and collection can be varied (col. 4, lines 19-51).

### **Claim 3**

Wiles discloses the claimed invention except for the distance of the light source to the measurement surface. It is inherent to someone of ordinary skill in the art at the time of the invention was made to find the optimum distance between the light source and measurement surface, since it has been held that discovering an optimum value or workable range of a result effective variable involves only routine skill in the art.

### **Claim 12**

Wiles substantially teaches the claimed invention except that it fails to show the use of a mounted (claim 7) diffuser (claim 6) and the space above the measurement surface has substantially radiation-absorbing properties (claim 10). Eidelman shows that it is known to provide the space above the measurement surface has substantially radiation-absorbing properties and to use a diffuser mounted (Fig. 6, ref. 60, claims 7-8) at a particular angle that is variable between the plurality of light sources used (col. 14, line 66-col. 15, line 3, col. 19, line 65-col. 20, line 10, col. 20, line 66-col. 21, line 22, col. 22, lines 43-61) for an semiconductor manufacturing inspection apparatus. It would have been obvious to someone of ordinary skill in the art to combine the device of Wiles with the light diffuser and light absorbing housing properties of Eidelman for the purposes of providing diffuse lighting and minimizing of internal light reflections inside the housing (Eidelman, col. 22, lines 50-61).

### **Claims 2 & 31**

Wiles as applied above further discloses wherein the angles of illumination and collection can be varied (col. 4, lines 19-51).

### **Claim 3**

Wiles discloses the claimed invention except for the distance of the light source to the measurement surface. It is inherent to someone of ordinary skill in the art at the time of the invention was made to find the optimum distance between the light source and measurement surface, since it has been held that discovering an optimum value or workable range of a result effective variable involves only routine skill in the art.

### **Claim 12**



Art Unit: 2877

It is the position of the Office that even though the reference of Wiles does not specifically disclose a circular or ellipsoid surface above the measurement surface, it does outline the importance of housing (col. 6, lines ). In light of the applicants disclosure, there is no critically distinguishing (name characteristic or whatever) feature in the applicants disclosure that exemplifies novelty over prior art disclosure. Therefore producing the same results as the applicants limitation, therefore the reference of Ref. A reads on applicants claimed limitation.

**Claim 20**

Wiles as applied above discloses a movable optical assembly over the inspection surface (col. 6, lines 57-61).

**Claims 21, 22, 25**

Wiles as applied above discloses at least one travel measurement means (col. 6, line 57- col. 7, line 7).

**Claims 26-30**

The method is taught by the functions set forth with regards to the apparatus claims 1, 10, & 25 as rejected above in view of Wiles in view of Eidelman.

7. Claims 19, 23, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Wiles in view of Eidelman and further in view of Schwarz (USPN '248 B1).

**Claims 19, 23, 24**

Wiles substantially teaches the claimed invention except that it fails to show a thickness measuring device. Schwarz shows that it is known to provide an aperture (claim 19, Fig. 1, ref. 4) with a first lighting means and a thickness-measuring device (claims 23, 24) for an

Art Unit: 2877

semiconductor manufacturing inspection apparatus. It would have been obvious to someone of ordinary skill in the art to combine the device of Wiles with the light aperture (shutter) and a thickness measuring device of Schwarz for the purposes of providing thickness measurements of coatings located on a substrate (Eidelman, col. 22, lines 50-61).

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

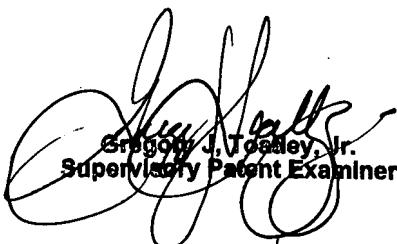
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D. Valentin II whose telephone number is (571) 272-2433. The examiner can normally be reached on Mon.-Fri..

Art Unit: 2877

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JDVII/  
Juan D Valentin II  
Examiner 2877  
JDV  
July 12, 2007

  
Gregory J. Toatley, Jr.  
Supervisory Patent Examiner  
